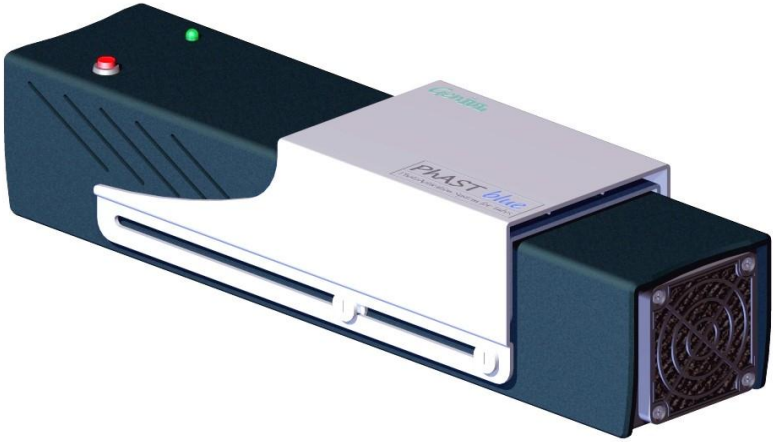
PhAST Blue



USER'S GUIDE

CE

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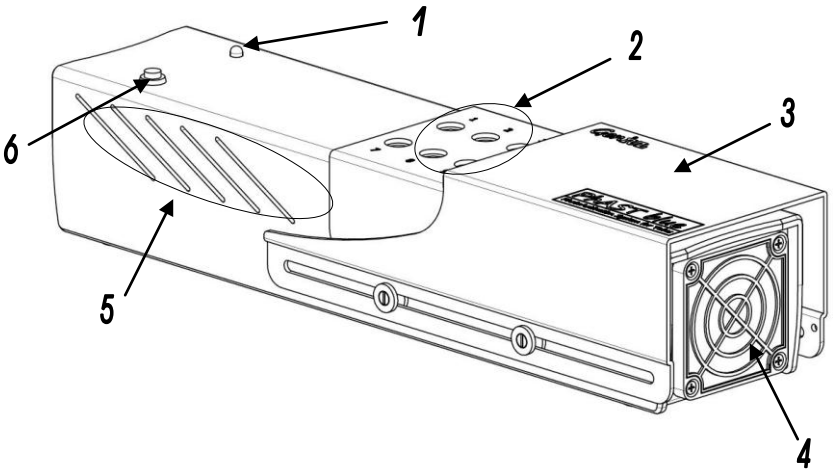
1. Description

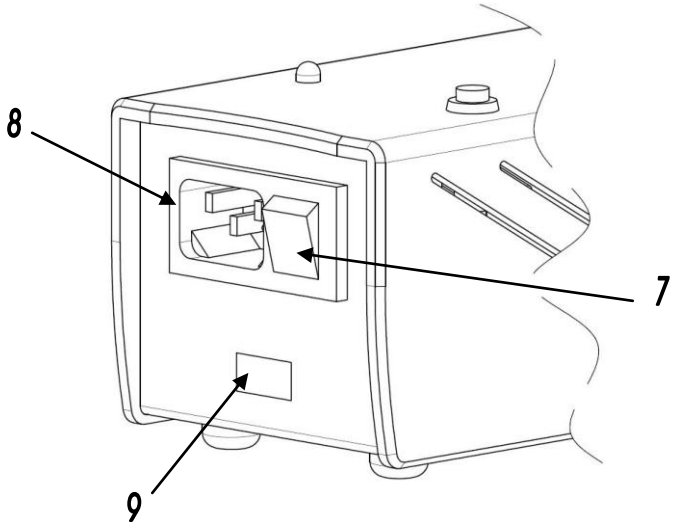
PhAST Blue equipment has been developed to neutralize the DNA of dead organisms through the use of photo-activation on intercalating agents. The samples treated with this system, only allow the detection of DNA of living cells by conventional PCR or Real Time PCR.

The *PhAST Blue* is a thermally stable equipment with a constant and uniform light dose, and very easy to use. The *PhAST Blue* allows simultaneous photo-activation of 12 samples in a simple and efficient manner.

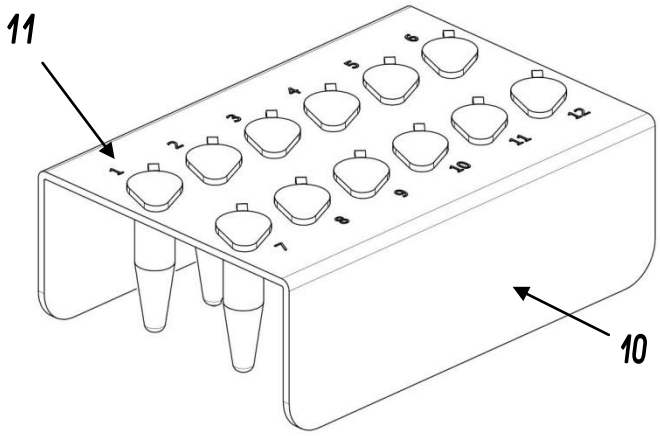
The *PhAST Blue* minimizes intra-and inter-laboratory variability, while the negative effect of overheating on the samples is avoided.



1- Indicator LED
2- Test micro-tubs zone
3- Eyes protective shield
4- Air inlet
5- Air output
6- Push button



7- Main Switch
8- Power plug
9- USB connector

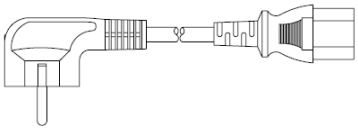


10- Test micro-tubes holder
11- Position test tube

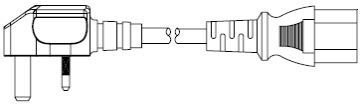
2. Connection

The *PhAST Blue* equipment is equipped with an IEC-60320-C13 plug to be connected to following power cord according to the country destination:

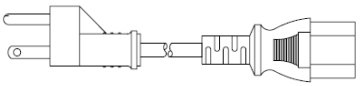
Europe
"Schuko" CEE 7/7 - IEC-60320-C13



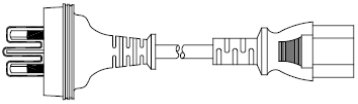
UK
BS 1363 - IEC60320-C13



USA, Canada, Japan
NEMA 5-15P - IEC60320-C13



Australia
AS3112 - IEC60320-C13



3. Running

The *PhAST Blue* equipment has been designed to work in autonomous mode (when the USB cable is not connected) or PC connection mode (when the USB cable is connected). In both cases, the equipment will work accordingly to the previously established photo-activation program.

Always install the micro-tubs in a holder. Never put the tubes in the hole without the holder. The design of unit requires it to put the tube in its correct position.
(WARNING- Always keep the fan air inlet as well as the slots situated both sides of the equipment for right refrigeration cleared).

3.1 Autonomous mode

Once switch ON the indicator LED is flashing green, introduce the tubes with the holder in the proper position, cover the tubes with the protective shield and push the pushbutton. The unit will start timing accordingly to the program stored in the internal memory (the default value is 15 minutes). During this period the photo-activation process of test tubes will be carried out, the indicator LED will be red along the period. During the process, any time that the shield is open the photo-activation LEDs will switch OFF automatically. Closing the shield the process will continue.

When the photo-activation time is over and after 30 seconds, the indicator LED will change from red to flashing green. Take the holder with test tubes out. From this moment, it is advisable to keep the equipment ON while the fan is ON (around 30 seconds) to refrigerate the equipment. The instrument is ready for a new photo-activation process.

3.2 PC connected mode.

PC Recommended Requirements for PhAST Blue Software:
500Mhz Processor, Intel Pentium/Celeron/AMD/K6/Athlon/Duron.
Windows XP/Vista/7.
384MB RAM. 20MB of free disk space.
800x600 pixels resolution VGA Video Adapter.

Once switch ON, the equipment is waiting to receive the configuration orders, start or stop from the PC through the control programme previously installed (see “PC control software section”).

When the “START” button is pushed, it will start time delay accordingly to the visualised program on the screen. During this period, the photo-activation process of test tubes, indicator LED red, will be carried out. During delay time we will be able to monitor the remaining process time and in any case, to stop the above mentioned process through “STOP” push button.

After finishing the refrigeration time and passed 30 seconds, the red sign will turn to flashing green colour and it you will be able to take the holder with test tubes out. From this moment, it is advisable to keep the equipment ON while the fan is ON around 30 sec. The unit is ready again for receiving new configuration orders or start.

4. PC control software

When USB cable is connected, the PC takes control and the *PhAST Blue* equipment follows the installed software.

When running the control software the first time, it is required to choose the Serial Port to control the equipment (usually it corresponds to the last port shown in the active list). In case of choosing the wrong port the programme will not communicate with the equipment and then it will be necessary to choose another port through the “Configure USB” button.

Driver installation and control software

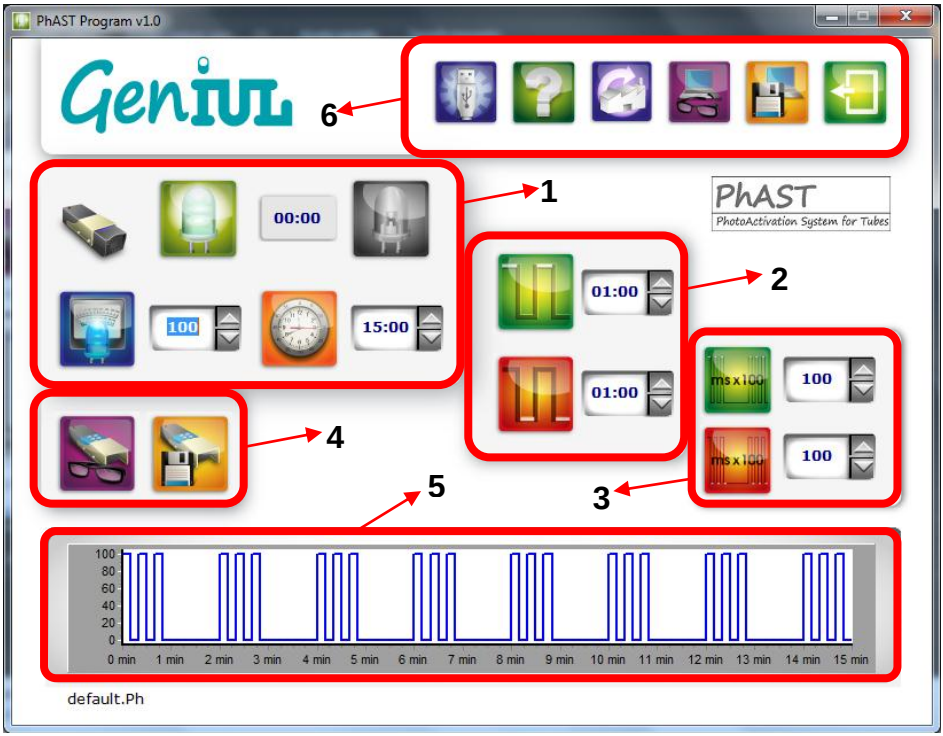
The software can be found in the website www.geniul.com.
Going to SUPPORT and DOWNLOAD.

After registration you can access to the program to be installed in the computer. This installation must be done working as administrator.

Follow the steps in the installation program supplied.

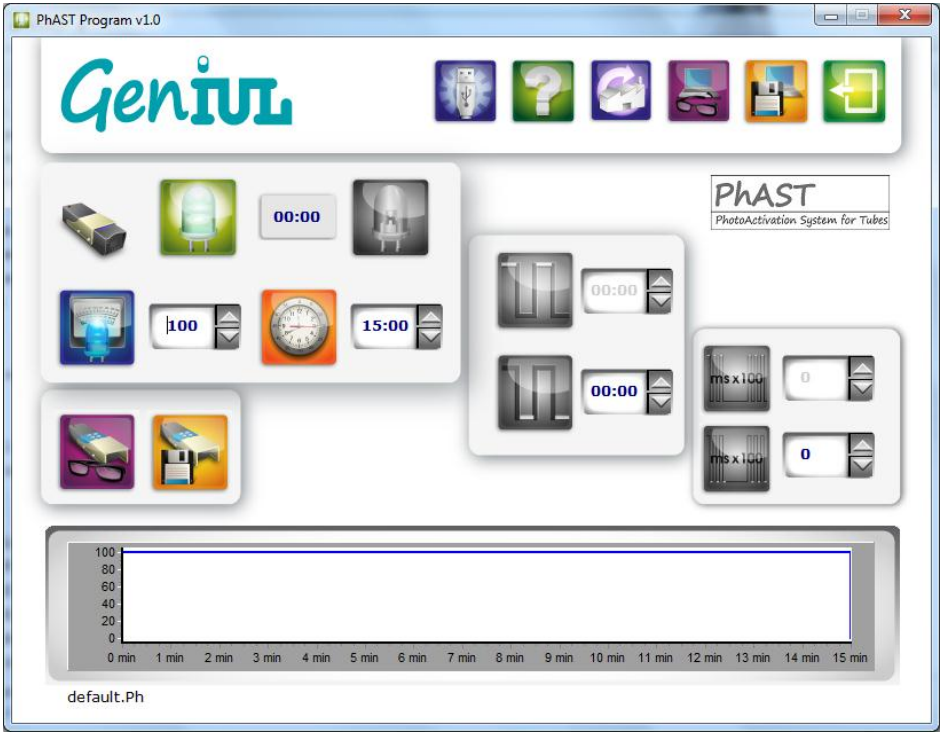
5. Complete screen PC controlled.

The screen is divided in 6 separated sections as follow:



5.1 Section 1. Basic work.

Section 1 refers to the basic operation with the PhAST blue.
It allows to program the Intensity and Time process other than the 100% intensity and 15 minutes (value of parameters by default, in no PC mode).



The first row refers to the working functions:

This automatic information icon shows if the eyes protective shield is open or closed. The unit can only work with the warning triangle erased.

The Basic operation accepts to change two parameters: Intensity power intensity of the light and the Total working time. Section 2 and 3 are disabled (grey mode).

5.1.1 Working functions

“START”
Starts the photo-activation process

“STOP”
Stops the photo-activation process at any time.

Between this two buttons there is a window with the indication of the elapsed working time.

The second row allows to program the parameters:

5.1.2. Parameter configuration

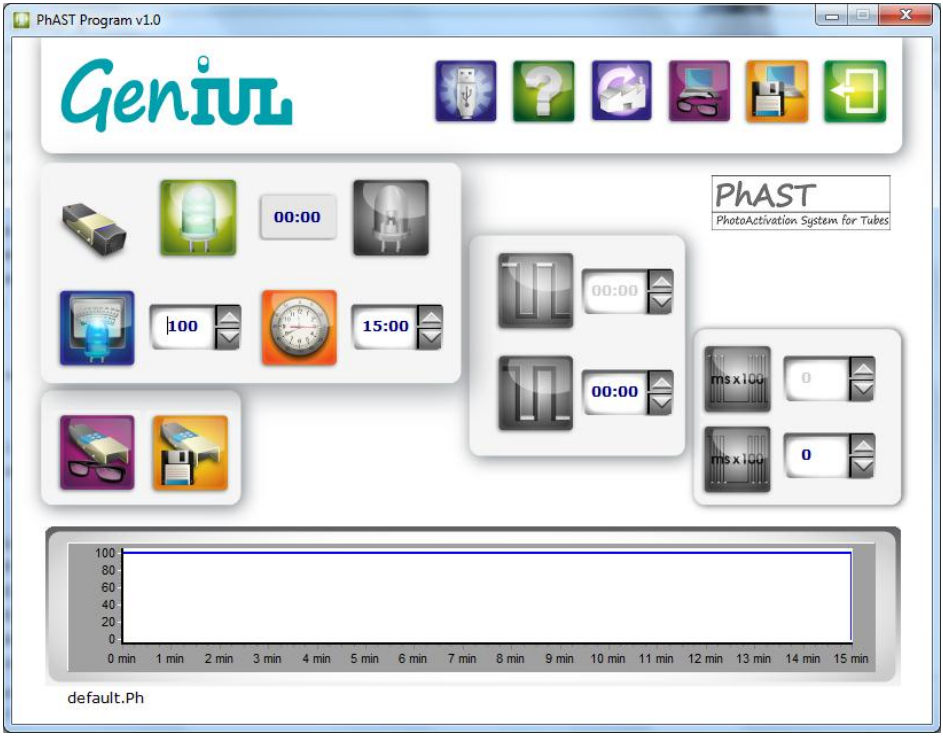
“Intensity”
Set the photo-activation LEDs power percentage.
Minimum value 10%, Maximum value: 100%

“Total time”
Set the total photo-activation process time.
Minimum value: 00:30, maximum value: 59:59, Format (minutes: seconds).

5.2 Section 2. Repeat cycles.

The use of these controls allows repeating the light cycle.

During photo-activation process total time, a working cycle can be repeated as many times as the total time allows.



In order to activate this Section 2, set a value different than 0 in Time OFF (is the only parameter available in this situation).

Repeat cycle
“Time ON”

Determines the Photo-activate LEDs start time in a working cycle according to the set frequency and intensity
Minimum value: 00:00, maximum value: 59:58, Format (minutes: seconds).

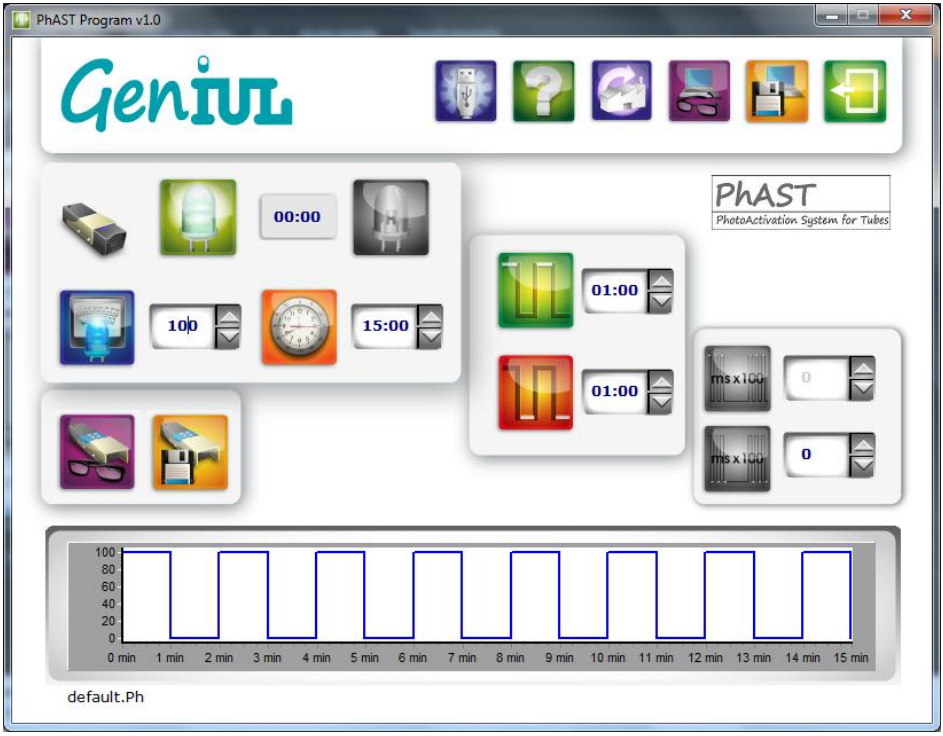
Repeat cycle
“Time OFF”

Determine the Photo-activation LEDs time off in the working cycle.
Minimum value: 00:00, maximum value: 59:58, Format (minutes: seconds).

The addition of the two values “Time ON” and “Time OFF” must be equal or lower than “Total Time”.

5.3. Section 3. Frequency

When the photo-activation LEDs are lighting in a working cycle, not only the intensity can be set, but also the light can flash in shorter cycles.



In order to activate this Section 3, set a value different than 0 in Pulse OFF (is the only parameter available in this situation).

The use of these buttons allows to set the length and frequency of the flashing program.

Frequency
"Pulse ON"
Determine the LED switch on pulse
Minimum value: 0, maximum value: 100, Format (1 unit = 100 milliseconds).

Frequency
"Pulse OFF"
Determine the LED switch off pulse
Minimum value: 0, maximum value: 100, Format (1 unit = 100 milliseconds).

The addition of the two values "Pulse ON" and "Pulse OFF" must be equal or lower than "Time ON".

6. Section 4. Program transfer from/to PC.

“READ”

Read the program stored in the equipment and transfer it to the PC. In the PC screen the stored parameters can be seen.

“SAVE”

Store the PC active program in the internal memory of the equipment.
The active program is the one which is running while the equipment is on. Once stored in the internal memory, this will remain as the instrument autonomous program.
The active program working in the unit must be saved to maintain it. If the parameters have been modified but they have not been saved they will be lost when switching OFF.

7. Section 5. Graphic display of program.

The programmed graph shows usually the total timing parameters, working cycle, frequency and intensity set with reference to the working program. This graphic is dynamic and auto scaled automatically.

8. Section 6. General functions.

“Configure USB”
Select the assigned Serial equipment Port which to be controlled.

Manual
Allows opening this manual in the PC screen.

Default parameters
Allows returning to the initial default parameters.

Program "READ"
Reads the directory *profiles* stored program files and transfers the selected program to the PC and shows it.

Program "SAVE"
Save the active program in a programs file in the profiles directory.

"EXIT"
Exit from the application.

5. Cleaning

Disconnect the equipment from the power supply for cleaning. Use a lightly moistened cloth or an antistatic cloth. Do not use cleaning agents or abrasive dissolving products.

6. Technical specifications

Dimensions:	355mm x 90mm x 83mm
Weight:	1,2 Kg
Working temperature:	+5 ºC a +25 ºC
Power range:	100 ~ 240 VAC
Frequency range:	50 ~ 60 Hz
Maximum power:	60 W
PC connectivity:	USB

7. Safety advice

- Please do not switch on the equipment if the power cord or the equipment is broken.
- Do not open the instrument cover, electrical danger inside.
- Do not drop liquid in the equipment. Switch off furthest end of the equipment from the power point immediately.
- Do not look at internal LEDs used for test tubes photo-activation. There is a potential risk for your eyes. The unit has a protection shield that only permits the LEDs lighting when closed.
- Do not use the equipment in extremely damped environment.
- Do not cover the equipment or the fan zone if it is working.

8. Warranty

The *PhAST Blue* equipment has a 12 months warranty period which starts when the final customer purchase it.
The warranty is void when misuse of the equipment can be proved.
There are no included damages or manufacturing faults caused by nocks, chemist or corrosives products, liquids, damp or other external factors like ray, fire, inadequate transport.
In addition, the warranty will not apply if the equipment has been handled, repaired, modified by not qualified or specifically designated personal.

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www.geniul.com